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New Zealand

Bio-Fuels

New Zealand Bio-Fuels Bill Update

2008

Approved by:
Laura G. Scandurra
U.S. Embassy

Prepared by:
David E.Lee-Jones

Report Highlights: A parliamentary select committee recommended amendments to the New Zealand Government's Biofuels Bill, partly due to fears that the planned 3.4% sales obligation would force imports of unsustainably produced biofuels, thereby undercutting the bill's aim of reducing emissions. Under the draft bill, oil and diesel suppliers would have been required to introduce biofuels at the rate of 0.53% beginning July 1, 2008, rising to 3.4% by 2012. Under changes recommended by a parliamentary select committee, the scheme will now start on October 1, 2008 and the obligation levels will reach 2.5% by 2012.

Includes PSD Changes: No
Includes Trade Matrix: No
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In February 2007, the New Zealand Government announced a Biofuels Sales Obligation (BSO) to improve energy security by encouraging the uptake of alternative transport fuels and help cut greenhouse gas emissions. The Biofuels Bill required oil companies to sell a minimum percentage of biofuels from July 1, 2008. The mandatory requirement was set to start at 0.53% of energy rising to 3.4% in 2012. However, Parliament's Environment Select Committee, which reported back on the bill on June 23, 2008, recommended the obligation be cut to 2.5% by 2012 and that the start date be delayed until October 1, 2008.

New Mandatory Biofuels Sales Targets for New Zealand

Year (Oct/Sept)	2008[1]	2009	2010	2011	2012
Revised Obligation %	0.50	1.0	1.50	2.00	2.50

When the original sales obligation target was set at 3.4%, it was reportedly premised on the basis that local feedstock of ethanol and biodiesel would be readily available for the New Zealand market, which has not proven to be the case. As a result, there is concern that a higher target would force the import of unsustainably produced biofuels undercutting the bill's aim of reducing emissions.

The sustainability of biofuels is controversial in New Zealand. Two of the primary concerns are the felling of rain forests for the planting of biofuel crops, such as palm oil; and the competition between many first generation biofuels – soy, corn, sugarcane and rapeseed – and their uses for food and animal feed, which is seen to be driving up food prices. In a submission earlier this year, Parliamentary Commissioner for the Environment Jan Wright called for the bill to be scrapped saying that the carbon footprint of many foreign-produced biofuels, when their whole lifecycle was taken into account, was worse than fossil fuels.

The Biofuels Bill, as originally introduced, did not explicitly require biofuels to meet a sustainability standard. However, in response to concerns regarding the sustainability of biofuels, the Environment Select Committee recommended the following principles be inserted in the bill:

- Biofuels must have a lower life-cyle carbon footprint than fossil fuels;
- They must not compete with food production;
- Their production must not reduce biodiversity or undercut conservation values.

The food competition clause will not cover food byproducts, rotational oilseed and sugarcane crops, which will likely encourage imports from Brazil. Ethanol also has the advantage of not being subjected to New Zealand's fuel excise tax, although the select committee said further work should be done to eliminate this tax advantage. The new sustainability standard will prohibit the import of corn-based ethanol from the United States. While criticized by some as being impractical and difficult to enforce, the sustainability standards are expected to come into force via a Ministerial order in 2009.

Along with the development of sustainability standards, the Environment Select Committee recommended that the Biofuel Bill be amended to require the Energy Minister to set out the sustainability criteria for qualifying biofuels including:

- A methodology to assess life-cycle greenhouse gas emissions;
- A directive that they have at least 35 per cent less emissions than fossil fuels;
- A methodology for assessing the impact on food production.

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Domestic production of biofuels is limited in New Zealand. While there is some bio-ethanol produced from whey, it is not a large quantity. Fonterra, New Zealand's largest dairy cooperative, reportedly produces about 20 million liters of whey-derived ethanol annually and sells around 10% of this as fuel. Currently, all of the ethanol sold by Gull, one of two retailers selling biofuels in New Zealand, is sourced from Fonterra. There is also biodiesel from tallow although there are reportedly some problems yet to be resolved with its behavior in cold temperatures. New Zealand produces approximately 140,000 tons of tallow annually, of which, approximately 86% is exported.

Finally, there is also biodiesel from rapeseed, which is reportedly of interest to Solid Energy, a major New Zealand energy company. Biodiesel New Zealand, which is majority owned by Solid Energy, produces fuel from two sources - used vegetable oil collected from restaurants and food processors throughout the country, and from locally grown oilseed rape crops. The fuel is manufactured in Canterbury and supplied to fleet operators, fishing boats and tourism ventures. Biodiesel New Zealand aims to increase output to 60 million liters a year by 2011. This would mean increasing the land area devoted to oilseed rape (OSR) production to 30,000 hectares. This is a considerable area for New Zealand, partly because other intensive agriculture such as dairying, vegetable and cereal cropping and the wine industry compete strongly for the best land. The OSR target area is comparable to the total vineyard area in New Zealand. With regard to the biofuel sustainability regulations, OSR has been designated a rotational crop as long as it is only grown for one year at a time, thereby not interfering with food production.

Domestic production from tallow, OSR, whey and other sources could potentially satisfy the sales obligation in the Biofuels Bill, if not in the short term, then in the medium to long term. It is expected that domestic production of biofuels will be more economic for oil companies because they won't need to invest significantly in infrastructure as the domestic biofuel producers will provide most of the storage.

Current Fuel Usage in New Zealand and Estimated Quantities of Biofuels Needed to Satisfy the Proposed Sales Obligations

Total Transport Fuel	
Est. Annual Fuel Usage (Liters)	6,300,000,000
% Sales Bio-fuel Obligation	Liters of Bio-fuel to Satisfy Sales Obligation
0.50%	31,500,000
1.00%	63,000,000
1.50%	94,500,000
2.00%	126,000,000
2.50%	157,500,000

Potential Domestic Production from Tallow and Oilseed Rape

Tallow Industry:	
Potentially Available Tallow (tons)	120,000
Conversion rate liters/ton	1,000
Potential Total Available	120,000,000
Oilseed Rape(OSR) Industry:	
Current area (hectares)	5,000
B100 Yield Liters per Hectare	1,600
Approx Total	8,000,000
Target OSR Area (hectares)	30,000
Target Yield B100 Yield liters/hectare	2,000
Target Total Production of OSR B100	60,000,000
Potential Total Domestic Production (over 3-5 years)	180,000,000

Further Information

Energy Efficiency Conservation Authority
http://www.eeca.govt.nz/renewable-energy/biofuels/index.html

Ministry of Economic Development
http://www.med.govt.nz/

Ministry of Transport
http://www.transport.govt.nz/

Statistics New Zealand
http://www.stats.govt.nz/